

## ABSTRACT

A method for packet processing for data transmission over an optical fiber, the method including the steps of segmenting an incoming bit stream, adding a tag to a header of each segment, each tag including data identifying a route between a source and a destination end-point of the bit stream, encapsulating the tagged segment into a Point-to-Point Protocol (PPP) packet, and mapping the encapsulated packet into a transmission frame (SONET/SDH or other) for transmission over an optical fiber.